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ABSTRACT

This document summarizes 20 articles and books which stress the importance of movement in the overall development of the human species. Each summary ranges in length from 100 to 200 words and often includes direct quotations. A wide range of movement activities suitable for people of all ages (from infants to adults) are discussed. Many summaries also provide explanations of the activities' importance for both child and adult development. Specific topics are (1) materials and inservice training for elementary and early childhood teachers to implement movement education programs; (2) the relationship between large motor skills and learning to read; (3) remediation programs which use movement activities for adult prisoners and for children; (4) providing an environment and activities to encourage physical movement in infants; and (5) using movement to music, imitation of emotions, and dance to teach children motor skills, make them sensitive to their own and others' emotions, and encourage creativity. It is hoped that the literature on movement will influence educators to integrate physical education into all areas of teaching. (CB)

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RESEARCH PROJECT

"MOVEMENT"

Lynda Roberts
December 1980

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Introduction

Time to Move - A Philosophical Stand

A rose, is a rose, by any other name
A movement, a movement and still its the same
For we have defined our profession
Not athletics, not sports, not recreation or leisure
Not democracy, not values, not self concept, no more
For we have defined our profession
Movement is the philosophy, movement is the objective, movement is our
stand.
Throughout the world we must take notice and band together
Over and over, we have clouded the issue
But the basics are all we need and preschool is our seed for the future.

Begin at the beginning, and then we may see
That movement means the same to you, and me
And nothing more, years have gone by and we still ask why
McCoy? Williams? Nash? - Who is right, and the fight continues
But again, we must move
For movement is all we are, there is but one bright star
That the answer has been here
A rose, is a rose by any other name
A movement, a movement its still the same
For we have defined our profession
Stagnation beware, for new it is - Time to Move
(Angell, pg 20)

This poem states the new awareness of physical educators in the
value of movement. Not teaching athletics, games and sports but

educating in movement. The following material will stress the importance of movement in the overall development of the human species. How we use our bodies is an important part of who we are.

Dennis Estabrook in a workshop on movement stressed six major sensory motor areas:

- 1) Self awareness and space awareness
- 2) Gross agility - large muscle coordination
- 3) Balance
- 4) Locomotor agility - running, galloping, jumping
- 5) Coordination - eye hand, eye foot
- 6) Rhythms and dance

He is affiliated with Children's Health International. They give workshops in movement for teachers and in service programs. They demonstrate strategies and equipment. Much of the equipment they advocate can be made or collected by parents and teachers of the children involved in a school movement program.

They have done research on the children involved in their movement program and compared their test scores with those who have not had a comprehensive movement experience. The test results of those in their program were significantly higher.

The following tips on teaching motor skills in movement are from this program.

TIPS ON TEACHING MOTOR SKILLS IN MOVEMENT

1. Arrange the class in a teaching formation that permits every student to have a clear view of your demonstration.
2. Also eliminate unnecessary interference such as equipment, poor

- lighting, and excessive noise. Communicate in a classroom any lengthy verbal instruction, then go outside to get into activity.
3. Explain the skill in a clear and concise manner. Allow time for the class to digest each important part of the skill.
 4. Pause repeatedly throughout the explanation and check to see if the class understands by asking questions. Where necessary repeat a particular part of the demonstration.
 5. Speak in a vocabulary that is appropriate to the group.
 6. Provide an accurate demonstration of the skill. If the teacher is unable to demonstrate, do not hesitate to use a pupil or visual aids.
 7. Provide a demonstration that is clearly visible to all students. Make sure handicapped students can see and hear!
 8. Execute a demonstration of the skill in a slower speed than normally performed.
 9. Repeat the demonstration several times, including a key explanation of one or more parts of the skill.
 10. Keep demonstrations short and to the point.
 11. Be patient and sympathetic; children acquire skills according to their own rate and through a variety of channels.
 12. If a child is not learning a skill in its entirety, break it down into more digestible smaller pieces.
 13. Give encouragement and praise rather than scorn and punishment, regardless of how small or large the task.
 14. Provide knowledge of results. Give verbal and visual feedback to help improve performance and provide more intrinsic motivation.
 15. Give children a chance to evaluate their own performance
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It has been documented in an article by Elsie Werra that a movement program implemented at her elementary school improved her students in a number of areas.

A program of "movement exploration" not only increased my first graders physical fitness, motor development and joy of physical activity - it improved their listening habits, creativity and confidence in their ability to adapt to their environment. (Werra, 60)

This particular program was planned by physical education specialists in this teachers district. Teachers were instructed through inservice workshops. The specialist presented material to the children twice weekly and the classroom teacher guided succeeding activities.

In our first grade program, six elements of movement were stressed; space, level, force, direction, time, flow. Movement progressed from small to large, high level to medium and low. Force was heavy or light, strong or weak, hard or soft. Direction was forward or back, sideways, diagonal, circular, up or down. Time was fast, medium or slow; flow was loose, bound or free. (Werra, 62)

In this study since the movement experience was school wide materials such as balls, balance boards, bean bags, tires, hoops were centrally located. Also teachers shared successful experiences with each other. All teachers in this study were happy with the successes of the children and felt their P.E. time was being used much more successfully than in the past.

A school wide program such as this also gets teachers thinking and cooperating about use of equipment and space on the playground. If only one teacher in a school is movement conscious implementation of such a program is much more difficult.

The book Learning to Move, Moving to Learn, by Wanda Arbuckle is an excellent source of simple movements for the classroom teacher.

It has the classroom teacher begin with a simple action the child can do and then broadens this experience such as bounce the ball:

Bounce the ball with two hands
Bounce the ball with one hand
Bounce the ball as high as you can
Bounce the ball as low as you can
Bounce the ball on a line
Bounce the ball around a circle
Bounce the ball while you jump rope
Bounce the ball in rhythm, to music
Bounce the ball to a friend
Bounce the ball against a wall
Bounce the ball and turn around
How many times can you bounce the ball in 10 seconds
Bounce the ball and clap
Can you think of other ways to bounce the ball?
(Arbuckle, pg 43)

In the book Before the 3R's by Mariann Winick, the importance of movement - not structured - but free movement is emphasized.

Movement, too, is a form of thinking; thinking made visible. In infancy, the two acts are simultaneous: to think is to act. When the infant wants attention, he drops his rattle out of the crib. Physical movement is also a teacher. The child learns by moving. Toddling about, carrying things, tripping, crawling, walking, he is always adding to his knowledge. Layer by layer, he keeps building up his supply of information about himself, and his environment. In the developmental process, movement is thus not only an outward manifestation of thought, but also its medium as well. (Winick, pg 103)

Sometimes we try to curtail the movement of young children with a playpen or walker, or swing or bed. But the active moving child is likely to be more mentally mature than the passive child. We do not blindfold children or put cotton in their ears to curtail auditory stimulation but we think nothing of confining a child to a room or a playpen.

A blind person or a deaf person can sometimes compensate for the loss of one of his senses through a sharpening of the others. What substitute is there for the freedom of movement? The child who is restricted in his movements, whose explorations are curtailed - whether physically or intellectually - soon

stops exploring. Inhibition and restriction can lead only to a restricted sense of self and a narrowing of horizons. (Winick, pg 3)

Movement therefore is extremely important.

Movement achieves functional unity between thought and the outward aspects of thought..... Throughout life movement is an indispensable accompaniment to intellectual growth. This is why a child must find it possible to move about freely in his environment.

In the book Daily Sensory Motor Activities by Bradley, Konicki, and Leedy activities in motor development are outlined in progression for the teacher of young children. The first comes body awareness, then space and direction.

Children need to discover how their bodies move. They have to be able to "sort out" one part of their body from another and they should be able to distinguish right and left when they enter the first grade.

We know that children start to develop an awareness of their bodies during infancy. In order that this awareness can be developed to the highest degree, the procedures described in this book should be used.

If a child develops a good image of his body, he will have a sound base upon which to build the perceptual skills which will be needed in future classroom activities.

In an article by Ellen Dehart titled "Whats involved in being able to read" she states, in order to read, a child must be aware of himself in space.

The child literally is in space, and he becomes the measuring rod for "his" space. Things are bigger than me, smaller than me, over me, under me, etc. His body begins to feel directions and distances and when adequate verbal communication exists between mother and child he learns to give labels to both the objects and his own actions as he relates to them. (Dehart, pg 73)

Another important aspect in the development of laterality. This is not a matter of learning verbal labels for right and left but actual physical awareness of each side of the body.

Research is showing that vision itself is aided by movement. We do not see things simply by vision, but by a combination of movement and vision. If this is so, movement in relation to objects is absolutely essential for the child to learn directionality.

She further states in order to read a child must be able to form concepts. Tests can be constructed for demonstrating graphically the relationships existing between a child's body balancing mechanisms and his performance in close visually centered activities such as reading, writing, drawing, etc.

A curriculum or structure of learning for preschool children should take into account the fact that the learning need of a small child involve his whole body in relation to the world about him.

The pre-school classroom must provide an atmosphere where the child can:

- 1) Become aware of himself through special relations. These should be particularly designed to develop gross motor control and coordination, balance, laterality and directionality.
- 2) Have many opportunities to develop fine muscle control, and especially those involving eye-hand coordination.

- 3) Have many opportunities to manipulate objects in order to gain knowledge that will lead to concept formation.
- 4) Have many opportunities to manipulate objects in time space sequence in such a manner that the child learns to control both his own movements and things in his environment.
- 5) Have many opportunities for verbal communication, so that as his body learns, he is able to learn verbal symbols for what he knows.

There is a lot involved in being able to read. Movement experiences are necessary and particular emphasis should be placed on these experiences in a preschool program. Not until a child has an understanding of his body, space, laterality, directionality can he attend to letters on a page and make sense of them.

In the article by Arline Julius, Focus on Movement: Practice and Theory, she states that movement is necessary for expressing feelings, moods, and emotions. Language alone is inadequate so we say "I'm speechless", "I'm walking on air", "I had a sinking feeling", or "I was really moved by that". Children's movements are less controlled than those of adults. They may actually shake with anger, shiver in fear, or jump for joy. What can we do in movement calculation to help refine these actions, channel the we want to increase the range of possible.

Let me throw something to you. Catch it, its a ball:

Ping pong ball

soap bubble

falling leaf

You are able to modify your reactions accordingly. However a four year old cannot yet express all the appropriate variations in movement.

Acting out

Sit up proudly

Make your face look aggressive

Look timid

Sit as a very old person

Sit as though you are very tired

These actions help to emphasize mood and character.

Young children are unaware of the feelings of others, find it difficult to put themselves in another's position and assume that others think as they do. Objects and persons are seen from their own point of view.

In order to differentiate oneself from others and from objects, we must first of all, be aware of the extent and limits of our own bodies. We do this first through motor activities, not just by "seeing".

For individual children, awareness of self and one's relationship to other objects may but be learned by muscular and kinesthetic sensations, movement and touching, rather than by using the eyes. These individuals have been labeled haptic in contrast to those who are visual. Although everyone has some haptic tendencies, about one in four learns mainly through this sense.

Self confidence comes when you can test your own skill and do things independently. One researcher theorizes that girls do not develop as much confidence as boys in our society because they are not encouraged to test their motor skills in the same way as boys.

Self confidence comes too, with a non failure situation. There can be no wrong answer when a teacher gives general instructions for movement. Movement may be regarded as an integrating factor for all our senses. We hear, see and feel movement.

Can we really understand the meaning of certain words without having felt the movement of them - wiggling, soaring, flying, etc.

Movement has the power to totally involve the child - it is the most basic and strongest means we have to receive knowledge.

Start movement exploration gradually.

A second grade teacher had been developing movement possibilities for several months while motivating reading about penguins. The class had seen films on penguins, discussed the life span of penguins, drawn penguins, etc. One day, another teacher peeked into the room and noticed the whole class moving penguin-like to music. Intrigued, she borrowed the record and after a brief introduction, tried to involve her own class. The result was extremely disappointing. (Julius, pg 94)

A movement comes from within the body. Don't demonstrate "how to".
Try to involve the whole class.

There are no right solutions; there are many possible solutions.
Probably some you didn't think of.

At the end with a finger
with a hand
with an elbow, on arm, a foot
finally with a whole body
wave good-bye

According to Rita Wartin and Pat Furley, a basic rule in helping children develop motor skills is provide them with many opportunities to develop all their muscles. Young children need many opportunities for active, unstructured play in which both large and small muscles are

used in a safe/protected environment. They need freedom to romp, run, and climb and explore and manipulate a variety of objects. They need encouragement and practice in doing things for themselves and for others - like self feeding, taking off cap and mittens, shoes and socks; helping with small chores around the school and getting out and putting away their own toys. In fact, any activity that involves the child in learning by actively doing contributes in some way to motor skill development.

In the books Hop, Skip, Jump, Read and More Hop, Skip, and Jump, Blotner and Pugh emphasize the importance of sensory motor activities. Jim Pugh is on the faculty here at C.S.U.L.B. and even with his work with adults he emphasizes hands on experiences. As stated in Hop, Skip, Jump, Read

A growing amount of research confirms the facts that, in order for a child to progress through the many areas of learning with which he is confronted during his early years, he must develop sensory acuity and motor skills. Proper instruction in sensory motor activities to fulfill the need of educating the whole body must take place before a child has the ability to achieve academically in the areas of reading and language arts. (Blotner, Pugh pg 3)

Blotner and Pugh point out the responsibility of parents and educators to provide an environment rich in large and small muscle activities. Large body using the arms, legs, body muscles and small muscle using the hand and fingers. At the preschool level children are eager to learn. It is possible to go back and give children a second chance. They need our help in providing an environment rich in sensory motor experience to meet their goals.

In an article by Peggy Emerson and Cindy Leigh the importance of movement is examined in another vein. Not only should children be introduced to movement as physical education experiences but they should experience movement in the form of dance.

Translating research findings into practical application is possible only when individual teachers believe, deep in the core of themselves, that what they are doing will help children function better in a world demanding literacy skills. The idea supported here is that, through movement and dance, we can open to children new galaxies of experience as well as new perspectives on the experiences of their "everyday". Movement and dance education is a magic carpet to the land of "enchantment". - a rocket ship waiting to transport children from ordinary into the extraordinary! (Emerson, Leigh 120)

In a program of dance a teacher must first beware of areas of movement that dance can express. 1) Movement as expression - spaces of safe exploration for going over, under, on, etc. 2) Movement as expansion - things that their bodies can do that maybe other bodies can't do. 3) Movement as imagination - the ability to act out with our body like walk like an elephant, etc. 4) Movement at creation - express your feelings through your body - walk sad, etc.

Dance offers children a special kind of meaning. The imaginary, illusory world of time and space and body. It is the right of children to have access to dance as another expressive form, although all may not find their "voice" through expressive movement. Unless we, as teachers, expose all children to this vital expressive form, it may be that some will be doomed to a life of "silence". (Emerson, Leigh 122)

Teachers may feel insecure themselves in the area of dance so they avoid it. By merely appropriating time and space and music the children themselves will teach movement. Props to use include scarves, streamers, plastic strips, etc. Let the children take off shoes and move to the music. Music from a country of culture being studied in study unit really can bring a unit alive. Don't be afraid of doing it wrong. In movement for expression there is no wrong way.

According to Susan Stinson, in her article "Movement as Creative Interaction":

Dance is not just ballet or rock and roll or the waltz, but any movement done for the sake of moving and performed with awareness and concentration. Babies begin to dance at the age of a few months when they bounce to music, delighting in their own rhythm. (Stinson, pg 37)

Although adults do music/movement activities with children and children imitate actions. . . .

The goal of dance for young children is not to create a "dancing doll" to imitate adults and to perform for them, but to facilitate development of a child who likes to move expressively, using movement created by the individual child. This type of dance also facilitates development of a good self concept and a child who feels comfortable with his or her own body. (Stinson, pg 38)

In the book by Stecher, McElheny, and Greenwood, the movement of children is analyzed. Children move rhythmically during many activities such as splashing water, building blocks, on the playground. Children also play with language and chant. A good teacher will enhance these natural experiences and build on them. Children normally move to music. Observers should not laugh or try to direct a child's movements but rather encourage movement to music.

After children have had many opportunities to move freely to a variety of music encourage children.

Don't start to move too soon when the music begins. Wait until you hear how it sounds to you. Close your eyes. It helps you listen better. Listen to this music. When you feel it deep inside you tap it with your fingers, bounce it off your knees. Feel it in your shoulders and back. Now put it in your feet and let it take you around the room. (Stecher, McElheny, Greenwood, pg 20)

Little children do not need to be taught how to dance - they need the supportive encouragement to pursue their own style.

According to Miriam Stecher the teacher's role in movement is a dual one: a catalyst for action and a stabilizer for focusing attention or the problem to be solved. She does not demonstrate or teach "how", although she is a coparticipant at times. She invites exploration by means of provocative and open ended questions.

With music tell children to move how the music sounds to you - the way it makes you feel. Then if you want to, you can try somebody else's way. Use the music stopping as the signal for children to stop their motion. Have children relax between selections. Tell them to close their eyes and listen. If there is room have the children lay on the floor. Help them to relax by lowering your voice and touching them gently. Have them listen to music quietly before they begin to move again.

Without music begin with simple movements. Walk across the room. Walk like you're in a hurry, walk like you're tired etc. Can you move around the room without using your feet. To encourage language ask children to describe how they moved.

The spontaneous reactions of others can be negative and inhibiting or positive and strengthening.

Inhibition may begin with the unexpected reaction of an observer who makes the child self-conscious. The laughter of peers, parents or teachers, whether in amusement or delight can bring sudden and painful embarrassment. Another negative influence is an adult's interference with many specific directives. The value movement is that is no right or wrong way.

Language skills and movement:

Teacher: "Lets use your backs and shoulders with this music" (play quick and staccato sounds) "How does it feel?"

Meg: "It's like shivering."

Teacher: "Now can we move them not a bit like that" (play a clear contrast - a soft, slow, waltz or soft shoe dance) "How does that feel?"

Tony: "Now the sun comes out."

Such attempts at communicating verbally after nonverbal movement responses to music encourage imagination in thinking and using language. (Stecher, pg 148)

The teacher should make it clear that the children can respond spontaneously and feelingly and that their individual response will be acceptable. This is ego strengthening. It gives the children (and the teacher) courage to adventure on new paths to constructive creativity without fear of getting lost (being wrong). There are many ways to the top of the mountain and we want to keep all of them open. The most memorable are not always the straight paths but that interweave and spiral around each other; from playful pleasure in movement to learning through movement, from learning through pleasure to pleasure in learning. (Stecher, pg 182)

Stephen Lehane in his book Help Your Baby Learn describes the activities of an infant into individual segments. He shows how each segment is important in the overall development of the child. He also suggests activities that enhance a baby's experiences.

From the child's world view, actions such as drooling, thumb sucking, and patty-cake are important signs of development, unfortunately, most of us are stuck with an adult world view which tends to consider important only those things, such as walking and talking, which resemble adult behaviors. Only when baby is accepted on his own terms, and not on ours, will developments be appreciated. (Lehane, pg 70)

This book suggests numerous activities for a parent to do with his child, 100 Piaget based activities for the first two years of life - to be exact. But the important message in this book is to let the child give you the clue. The book is designed so that one activity builds on the preceding activity. To use the book you find out where your child is and then proceed.

In a study conducted by Dr. Jaroslav Koch, a psychologist at the

Institute of the Cure of Mother and Child in Prague found there is recent evidence that babies who exercise vigorously from an early age not only end up ahead in physical development but actually "outlearn" their more sedentary counterparts as well.

Dr. Koch kept careful notes on three groups of infant boys. Two of the groups performed exercises prescribed by Dr. Koch. The third, a control group, did not exercise. The exercise program began when the babies were a little over a month old. Exercise periods included rhythmical exercises involving the large body muscles. The exercise program lasted for about a year and at the end of the study all three groups were tested for mental development as well as physical fitness.

Dr. Koch's test showed that the stimulated babies, both those who had an opportunity to exercise freely at the hospital and those whose mothers provided opportunities at home, developed further than the sedentary ones in several ways. They learned to talk sooner. For example, the average year old child has an active vocabulary of five words. However, the exercise-stimulated group had a vocabulary of 10 to 20 words at the same age. The exercise children's movement patterns, strength and coordination were also superior to those of the control group. (Kuntzleman, pg 28)

This thesis comes as a surprise to some educators who concentrate solely on a child's intellectual growth. It seems that earlier societies, either by accident or design were ahead of us with respect to furthering a child's mental development. Ancient cultures considered physical activity indispensable for survival. Physical activity was integrated into every phase of daily life. The ancient Greeks, especially stressed the fact that the body had to be cultivated if the mind was to be developed at all. This was true whether you were a spartan destined for military proficiency or an Athenian interested in culture. (Kuntzleman, pg 28)

To quote Dr. J. Piaget on

The extent to which a child is given an opportunity to interact with objects in his environment determines how he coordinates the movements of his body and body parts. As a result of this activity, the child forms mental images which can be recalled later. (Kuntzleman, pg 29)

Dr. Koch's study shows the active child learns more. The greater the contact with objects and increased variety of body positions and movements stimulates the child's brain and nervous system, enhancing his learning experiences.

In encouraging parents to exercise with their young children all doctors interviewed for this article stressed that exercise for babies for great - just as long as the exercise was something that baby did for fun, not something the mother did as a chore for the baby.

Some guidelines:

- 1) Two months best time to begin
- 2) Find a regular time - after bath, in evening, etc.
- 3) Do the exercise in the same place
- 4) Dress baby comfortably - nude, loose diaper.
- 5) Keep temperature comfortable
- 6) Use music
- 7) Use a crib for sleeping only - let a child have lots of opportunities to be in different locations and different positions.
- 8) Exercise with baby
- 9) Have fun

In the book Total Baby development by Jaroslav Kock a program of exercise is outlined to help parents foster physical fitness in their babies. He was often quoted in the previous article.

The mission is not to accelerate development, if by acceleration we mean artificially forced skills and performance. Rather it is to assure each child ample opportunity to exercise fully each unfolding capacity in an atmosphere of affectionate and sensitive caring. (Kock, pg 10)

The message of this book is good baby rearing. It is concerned with much more than physical fitness.

I am going to tell you how to unfold the total child: its senses, its playing, thinking, talking, emotions, habits, the collecting of life experiences and more. I will show you how to achieve your infant's potential through physical movement. Involved is 6-8 exercises per day lasting 10-15 minutes 7 days per week. (Kock, pg 50)

This book is a specific in movements it advises for baby at all levels of development. You test the baby to see where he is then proceed in a specified sequence.

In Clare Cherry's book on movement, she describes the basic movements all children make and the order of their acquisition:

Wriggling, squirming - whole body

Crawling - all fours,

Creeping - hands and feet

Walking

Walking on tip toe

Running

Jumping

Galloping, hopping

From basic reflex patterns, he begins to develop from head to toe and from into-to-out. The baby starts to hold his head up and tries to grasp for things off to the side if they are put near his hand. He uses his fingers and his palms for holding. Then he learns to bring his hands to midline so that he can grasp hold of and look at objects from the front. Through various progressive stages, he begins to use the thumb and index fingers to pick up things. (Cherry, pg 93)

By the time a child is between six and eight months he tries to get up on his hands and knees, first rocking back and forth and then propelling himself forward by creeping. This is often preceded by rolling, scooting or crawling on the abdomen, using the hands and arms to pull and the legs to push. During these first six to eight months the child is also learning to use his eyes in a meaningful way. These movements cannot be overstressed in normal growth as the experiences of horizontal bilateral movement seem to be important in the development of other mental functions such as speech and vision. (Cherry, 97)

In this book Clare Cherry uses rhythm to encourage movement in children. She suggests bringing in worms, turtles, snakes etc. for young children to watch then imitate their movement such as: (after observing caterpillars)

Creeping crawly caterpillar

crawling, crawling by

(children lay flat on floor - inch forward)

Someday you will turn

Into a pretty butterfly

(Children stand - flap arms, walk on tip toe)

Someday you will turn

Into a Pretty Butterfly

These types of experiences make children more aware of movement and give them lots of ways to move their own bodies.

An article by John G. Rogers movement as remediation as explored in a unique program in state prison in Green Bay Wisconsin. Prisoners are involved in movement program. These prisoners include robbers, burglars, assaulters, even killers sentenced to life. They all have major problems in reading and writing and comprehension. When they came to prison they all suffered mental problems of holding themselves in contempt with almost no self-confidence. Now, what has this to do with crawling on the floor?

A person you might call a normal achiever in school and in life began as an infant to crawl around on the floor or the grass. This was the first thing that he ever did for himself in life and it established a precedent for later learning. Crawling gave him the beginning of confidence and an understanding of left and right which is absolutely essential in reading and writing. Also, it gave him the beginning of efficient short-range

vision because right there in front of his eyes were his hands moving and performing, and as he went along he encountered all sorts of other things that stimulated him - chair legs, end tables, balls, etc. (Rogers, pg 80)

The prisoners in this program range in age from 20 to 27 and never got to crawl for various reasons. Because of this lack they did not take the first steps toward developing normal perceptions. In testing it was found that they could not accurately see letters in a book or a blackboard. They did not know left from right. Concentration and memory failed to develop. In school they sat there understanding little, learning little, becoming increasingly bored and frustrated. Then they dropped out, took to the streets and some sort of crime was just about inevitable.

Men in this program soon saw self-improvement and carried on with enthusiasm.

After the crawling comes the next exercise. Some 50 little wooden blocks are positioned about the floor to create a maze. A prisoner has to get through them on a limited number of steps. This is decision making - something he never has done effectively. He stares at the maze. Works out his stepping plan and then tries to execute it. The blocks are constantly switched around to present new problems. (Rogers, pg 82)

Warden Elmer O'Cady, "There is no question about us needing some more enlightened concepts in our prisons. So many of these young offenders simply can't express themselves. That leads to frustration and that leads to crime." (Rogers, pg 82)

Although this was a very limited study in only one prison its implications are awesome. The enthusiasm of the participants and the graduates points to basic lack of experiences available. This opens new avenues of study.

There are centers now in existence that help children who have obvious problems in the perceptual and motor areas. One such center is operated through the Orange Unified School District. If children are referred to this center who are having difficulties in school in the perceptual or motor areas. The center also provides in service training for the teachers in its district. The handbook is an excellent source of equipment and activities for a movement program.

The objective of the Perceptual and Motor Development Center is to provide an environment in which each child can develop to his potential. A sequential developmental approach is used, evaluating each child to determine what level of development he has reached, what areas are immature, and then a program is set up to meet his needs. It is generally held that each developmental step is in some way dependent on the previous steps. It is our philosophy that if the brain develops the capacity to perceive, remember and motor plan, this ability to mastery of any task regardless of content. If a child has good motor and perceptual development, his mind is free to concentrate on abstract matters. (Rasmussen, Samuelson, pg 3)

The program outlined at inservice workshop for teachers covers the following areas and sequence (1) Body awareness, (2) special awareness, 3) gross motor - a) stomach and back, b) crawling, c) rolling d) on feet 4) tactile 5) eye tracking 6) auditory.

All activities go from simple to complex. From large body movements to small. From slow to fast.

Some indications that there are potential problems in young children as outlined in the handbook:

- 1) Poor body awareness and spatial awareness. Child bumps into things, tripping and falling easily, overall clumsiness.
- 2) Looks stiff and awkward while walking or running
- 3) Tires easily, lethargic
- 4) Avoids or over reacts to being touched or touching

- 5) Avoids contact with materials such as sand, finger paints, different textures of clothing.
- 6) Very hesitant or fearful of new situations.
- 7) Vague hand dominance (child usually has established by five)
- 8) Child who uses just one hand or hops only on one foot.
- 9) The allergic child, premature child or child who has been adopted.
- 10) Child who is slow to respond to verbal directions.
- 11) Poor posture.
- 12) Late in development milestones.

None of the above are indications alone that there is a problem but especially children exhibiting these behaviors should be involved in a comprehensive movement program before poor classroom achievement exists. The existence of this center and others like it is proof that there is an awareness of the importance of movement education in the elementary school curriculum.

In the book Perceptual-Motor Learning some interesting issues are raised concerning the success of children who are involved in movement programs.

Researchers who have conducted studies in this area have often found what appears to be a positive relationship between improvement in motor skills and improvement in learning areas such as reading. This research has been questioned, however, because certain extraneous factors have not been eliminated. For example, when improvement is noted, is it due to improved motor skills, attention span, concentration, attitude, self image, or to the individual attention showed each child? Critics of the perceptual motor theory contend that until these questions are answered satisfactorily there will be some doubt concerning the validity of the entire concept. (Lerch, Beeker, Ward, Nelson, pg 5)

Despite their criticism most critics admit it is becoming more difficult to discount the role of the motor system in the development of learning but there is a great need for more research. If it is

found that there is not a correlation between improved motor skills and reading ability is the inclusion of motor development in a curriculum important. Are good motor skills important in the life of the child - even if they do not lead to improvement in other areas.

It should also be noted that not all children with learning problems have a perceptual and/or motor basis for the problem. Perceptual-motor theorists have occasionally become so excited about the potentialities of their research that they have suggested that perceptual-motor programs should be used to help all children with learning problems. It would seem reasonable to assume that many problems being experienced by children may be perceptual and motor based, but due to the complexities of the human organism and the limited knowledge we have of the learning process, it would not seem prudent to affix a "cure-all" label to the perceptual-motor concept. (Lerch, Beeker, Ward, Nelson, 1976 pg 8)

Piaget in his study of the movement experience of young children divided sensorimotor development into six substages.

- 1) During Stage I or the first month of a child's life, he makes use of automatic reflexes such as sucking, swallowing, crying, and the like.
- 2) Stage II or the period from 1 - 4 months is highlighted by the child developing the ability to coordinate the use of more than one sense at a time. Such as reaching out to touch a toy.
- 3) Stage III from approximately 4 to 5 months is characterized by the child handling everything that comes near him. He now has the ability to cause something to happen.
- 4) In Stages IV and V a period from 6 to 18 months the child begins to understand the difference between means and ends. He will, for example, attempt different methods to obtain an object out of his reach.
- 5) In the final Stage VI which runs from 18 months to 2 years the child begins to bridge the gap from his sensorimotor stage to

the following period. He does this by inventing means to achieve desired ends, such as using a stick to reach an object.

It is very important in a movement program for a young child that teachers have a basic knowledge of how children develop. An activity above the ability and maturity of the child will not be fun or beneficial to the child. Any program to be appropriate to a given child first it must be ascertained where that particular child is developmentally.

Conclusion

It is evident today in activities of adults in our society that there is renewed interest and involvement in movement activities. Adults are not just participating in sports such as golf, bowling, tennis, baseball, etc. but they are getting involved in movement activities free of rules and team participation: Activities such as jogging, walking, weight lifting and dancing for exercise. There is a renewed interest in feeling fit - getting in shape - shaping mind and body. Articles written by joggers appear in all types of publications. They write of how running expands the mind - a new high - a psychological lift. Obviously the theory of a healthy body and an alert mind going hand in hand is not new. Historically physical education has been a part of education. How big a part, how important a part, how integrated a part is now the question. Sadly, we have more and more children - and younger and younger children - spending more and more time - focusing on paper and pencil activities. There is little time spent and little emphasis on the other ways we learn. I hope the impact of the literature available on movement influences educators to integrate

physical education (movement education) into all areas of teaching. Physical education should not just be after school sports, or games with rules but an integral part of education.

Teachers should get moving and get children moving to learn and learning to move.

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